

## CHAPTER II.

### GENERAL DISTRIBUTION OF TIMBER TREES IN NEW ZEALAND (*vide* MAPS).

1. In the rich variety of arboreal vegetation, the forests of New Zealand present a striking similarity to those of tropical countries. Except in the elevated parts of the South Island it is comparatively rare to find extensive areas of forest composed exclusively of a single species. In the North Island, tawa, taraire, kauri, rimu, totara, miro, matai, tanekaha, toatoa, rata, black maire, puriri, rawiri, mangiao, kohekohe, hinau, and many others may be seen growing in close proximity; no one tree, perchance, exhibiting a preponderance in the number of individuals. This feature is so strikingly marked over large tracts of country that it is difficult to select a single tree as specially characteristic of any particular district.

2. The kauri, from its high value, large dimensions, and especially from its marked distribution, has been selected as the typical tree of the northern district; but although it is the most important tree throughout the district, it nowhere preponderates to such an extent, say, as the beeches, in the South Island, or as the white pine in swamp forests, which sometimes extend for miles, and include no other trees within their boundaries.

3. The totara has been selected as the typical tree of the central and south-eastern portions of the North Island. It occurs throughout the colony, but attains its largest dimensions and greatest abundance in the district just defined.

4. The red pine has been selected as the typical tree of the south-western portion of the North Island.

5. It is even more difficult to select typical trees for the lowland districts of the South Island; for although the number of trees that attain dimensions sufficiently large to allow of their being classed as timber trees is less than is found in the North, still they occur so thoroughly intermixed that in many localities it is hard to say which is the most abundant. On the whole, the red pine has been selected, chiefly on account of its possessing the greatest commercial value at the present time.

6. For the elevated portion of the South Island, say above 1,000 feet, the beech must be selected as the typical tree: for miles one or other species, either singly or mixed in different proportions, forms almost the whole of the arboreal vegetation.

7. The tawa is certainly the most abundant tree in many parts of the North Island; but its limited economic value prevents its selection as a typical tree for our purpose. The puriri, pohutukawa, taraire, matai, and miro might each be selected as specially characteristic of certain limited districts, but for the present purpose it does not appear that a better selection is available than that already named.

### NORTH ISLAND.

#### I.—*The Northern or Kauri District.*

8. This district extends from the North Cape to Tauranga Harbour on the East Coast, and to Port Waikato on the West, and includes nearly the whole of the kauri forest. Its geological structure varies to a considerable extent, but does not appear to exercise a direct influence on the vegetation, none of the more important trees being absolutely restricted to any particular series of rocks. The North Cape is connected with the main land at Mongonui by a long stretch of blown sand, on which little or nothing can grow. Between Mongonui and the Kaipara the country is much broken, trachytic and basaltic rocks overlying palæozoic slates, often excessively broken and displaced, with overlying patches of tertiary rocks, chiefly sandstones, clays, and occasionally limestones. The highest point of this district is the peak of Maungataniwha, 2,100 feet. Many of the ridges are very narrow, with steep sides, forming ravine-like gullies. The greater portion of this district is covered with dense forest. From Waipu to Waitemata is a large tract of country, chiefly of late tertiary formation, and consisting of low ridges and hills, chiefly of sandstones and clays, attaining its greatest elevation, 1,300 feet, at Mount Hamilton, but for the most part between 700 and 1,000 feet. On the Auckland isthmus the tertiary rocks have been pierced by numerous basaltic volcanoes, the decomposing products of which have produced a light soil of great fertility. The Cape Colville district, with its heavy forest unsurpassed in any part of the colony, consists chiefly of trachytic breccia and conglomerates, overlying palæozoic slate, often decomposing into stiff clays.

9. The climate is highly favourable to the growth of a luxuriant vegetation. From the official returns of the meteorological stations at Mongonui and Auckland it is shown that the average mean temperature for the year is 59°·7; the mean for the winter quarter being 52°·7; for summer, 66°·7. The extreme difference between the hottest and coldest months does not exceed 16°. The average annual rainfall at Mongonui is 55 inches, at Auckland 43 inches; the mean degree of moisture, 76. At Mongonui the prevalent winds are S.W., N.W., and E.; at Auckland, S.W., N.W., and W. The climate is therefore remarkably genial, free from extremes of heat and cold, drought or moisture, so that the arboreal vegetation exhibits greater variety and flourishes with greater luxuriance than in any other part of the colony.

10. The kauri, *Dammara australis*, extends throughout the district, sometimes scattered in single trees, usually clumps of smaller or larger size, most frequently as groves or blocks of greater or lesser extent. At the present time it is most abundant in the Wairoa district and on the Cape Colville Peninsula. Interspersed with the blocks of kauri are incidental blocks of tawa, taraire, entire-leaved